

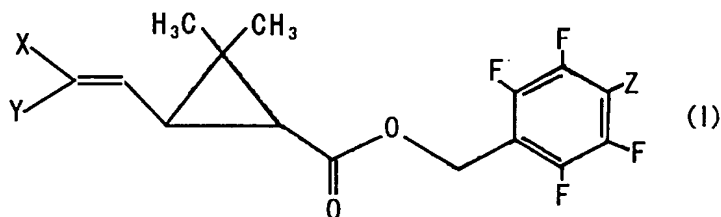
What is claimed is:

1. A cartridge for insecticide transpiration comprising:
an annular hollow structure which has openings in an inner peripheral surface and an outer peripheral surface thereof;
a core portion situated at the center of the hollow structure and connectable to a rotation support shaft;
a plurality of spoke portions connecting the core portion and the hollow structure;
and blade portions integrally formed with the hollow structure so as to extend from the inner peripheral surface toward the center thereof and adapted to promote passing of air from the inner peripheral surface to the outer peripheral surface of the hollow structure.
2. A cartridge for insecticide transpiration according to claim 1, wherein the hollow structure is composed of a main body member and a cover member engaged therewith.
3. A cartridge for insecticide transpiration according to claim 1, wherein the openings consist of a multitude of opening slits formed in parallel.
4. A cartridge for insecticide transpiration according to claim 1, wherein the cartridge for insecticide transpiration is made of a polyester resin.
5. A cartridge for insecticide transpiration according to claim 4, wherein the polyester resin is polyethylene terephthalate.
6. A cartridge for insecticide transpiration according to claim 5, wherein the polyethylene terephthalate has an intrinsic viscosity of 0.7 dl/g or less.
7. A cartridge for insecticide transpiration according to claim 1, wherein a hollow structure accommodates granular chemical-impregnated material containing at least one insecticidal

chemical.

8. A cartridge for insecticide transpiration according to claim 7, wherein the chemical-impregnated materials are accommodated in the cartridge for insecticide transpiration at a void ratio of 20 to 70%.

9. A cartridge for insecticide transpiration according to claim 7, wherein the chemical-impregnated materials include a fluorine-substituted benzyl alcohol ester compound represented by formula (I):



wherein X and Y are identically or differently represent hydrogen atom, methyl group, halogen atom or trifluoromethyl group, and Z represents hydrogen atom, fluorine atom, methyl group, methoxymethyl group or propargyl group, or a mixture thereof.

10. A cartridge for insecticide transpiration according to claim 7, wherein the at least one insecticidal chemical is selected from 2,3,5,6-tetrafluorobenzyl-chrysanthemate, 2,3,5,6-tetrafluorobenzyl-2,2-dimethyl-3-(1-propenyl) cyclopropane carboxylate, 4-methyl-2,3,5,6-tetrafluorobenzyl-chrysanthemate, 4-methyl-2,3,5,6-tetrafluorobenzyl-2,2-dimethyl-3-(2,2-dichlorovinyl) cyclopropane carboxylate, 4-methyl-2,3,5,6-tetrafluorobenzyl-2,2-dimethyl-3-(2,2-difluorovinyl) cyclopropane carboxylate, 4-methoxymethyl-2,3,5,6-tetrafluorobenzyl-chrysanthemate, 4-methoxymethyl-2,3,5,6-tetrafluorobenzyl-2,2-dimethyl-3-(1-propenyl) cyclopropane carboxylate,

2,3,4,5,6-pentafluorobenzyl-2,2-dimethyl-3-(2-chloro-2-trifluoromethylvinyl)cyclopropane carboxylate,
4-propargyl-2,3,5,6-tetrafluorobenzyl-3-(1-propenyl)-2,2-dimethylcyclopropane carboxylate,
4-methoxymethyl-2,3,5,6-tetrafluorobenzyl-2,2,3,3-tetramethylcyclopropane carboxylate and
4-propargyl-2,3,5,6-tetrafluorobenzyl-2,2,3,3-tetramethylcyclopropane carboxylate, or mixtures thereof.

11. A cartridge for insecticide transpiration according to claim 7, wherein the chemical-impregnated materials include 60 mg or more of the at least one insecticidal chemical.

12. A cartridge for insecticide transpiration according to claim 7, wherein the chemical-impregnated materials include a substrate made of paper, pulp, cellulose-based carrier or synthetic resin carrier, or a mixture thereof.

13. An insecticide transpiration apparatus wherein at least one cartridge for insecticide transpiration according to claim 7 is connected to a motor through at least one rotation support shaft.

14. An insecticide transpiration apparatus according to claim 13, wherein the rotational frequency of the motor is in the range of 500 to 2000 rpm.

15. An insecticide transpiration apparatus according to claim 13, wherein the at least one chemical can be transpired from the chemical-impregnated materials at a transpiring amount of 0.01 to 0.6 mg per hour for 180 hours or more.

16. An insecticide transpiration apparatus according to claim 13, further including an insecticide remaining amount display function realized by liquid crystal and allowing visual inspection.

17. An insecticide transpiration apparatus according to claim 16, wherein the insecticide remaining amount display function is in correspondence with a plurality of cartridges for insecticide transpiration having different valid periods of use connected to a motor through a plurality of rotation support shafts; wherein a magnetic sensor or an optical sensor adapted to detect a signal from a magnetic tape or a metal member attached to the cartridges is provided on the surface of the insecticide transpiration apparatus opposed to the cartridges, and wherein a central processing unit receives the signal detected by the sensor to recognize the kind of cartridge.

18. An insecticide transpiration apparatus according to claim 16, which contains a circuit adapted to emit pulses of a natural frequency with the operation of the motor, wherein the central processing unit detects these pulses emitted to measure the motor operation time on the basis thereof and controls the display of the insecticide remaining amount.

19. An insecticide transpiration apparatus according to claim 13, further including a battery remaining power indicating function realized by liquid crystal and allowing visual inspection.

20. An insecticide transpiration apparatus according to claim 19, wherein the battery remaining power indicating function is realized by a display portion, a voltage reduction detecting circuit, and a central processing unit adapted to recognize a reduction in battery voltage and control the battery remaining power indication on the basis of the recognition.